## REMARKS

Reconsideration and allowance of the subject application are respectfully requested.

Claims 1-22 are now pending, claims 19-22 having been added in this Reply.

**Prior Art Rejections**

1. §§ 102, 103 Rejections: *Hirabayashi*

Claims 1-4, 11, 12, 14, 16, and 18 stand rejected under 35 U.S.C. § 102 as allegedly being anticipated by *Hirabayashi et al.* (U.S. Patent 5,680,225). Claim 5 stands rejected under 35 U.S.C. § 103 as allegedly being unpatentable over *Hirabayashi.* These rejections are respectfully traversed.

Independent claim 1 is directed to an image conversion method in which image data represented by a required number of pixels is obtained from original image data represented by a predetermined number of pixels. The image conversion method of claim 1 comprises: carrying out image conversion by obtaining, by interpolation calculation, image data represented by a number of pixels which is one-half of the predetermined number of pixels, from the original image data represented by the predetermined number of pixels; preparing an intermediate image by repeatedly carrying out image conversion at a rate of one-half of the number of pixels, until a number of pixels close to the required number is reached; and carrying out image conversion by obtaining, from the intermediate image, image data represented by the required number of pixels.

Thus, independent claim 1 is specific to an image conversion technique for achieving image data represented by a required number of pixels from an original image, in which one-half pixel reduction is repeatedly performed using interpolation calculation to obtain an intermediate image. The intermediate image has a number of pixels which is

close to the required number of pixels. Then, image conversion is performed on the intermediate image to obtain image data represented by the required number of pixels.

The applied reference, *Hirabayashi*, discloses an image reduction technique in which, to facilitate subsequent one-half pixel reduction, the original image is initially enlarged. Subsequently, one-half pixel reduction is repeatedly performed. See e.g., the illustration of enlargement followed by repeated one-half reduction shown in Figs. 7A-7D. Consequently, the image reduction technique of *Hirabayashi* does not use repeated one-half pixel reduction to obtain an intermediate image having close to the required number of pixels and then carry out a subsequent conversion to obtain the final image. Instead, *Hirabayashi* performs an initial enlargement followed by repeated one-half pixel reduction to obtain the final image.

According to MPEP §2131, "a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. Of California*, 814 F.2d 628, 631, 2 USPQ2d 1051 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ...claims." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913 (Fed. Cir. 1989). The elements must be arranged as required by the claims, but this is not an *ipsissimis verbis* test, i.e., identity of terminology is not required. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 ( Fed. Cir. 1990).

Applicant respectfully submits that the Office Action has failed to establish the required *prima facie* case of anticipation because the cited reference, *Hirabayashi*, fails to teach or suggest each and every feature as set forth in the claimed invention.

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Applicant respectfully submits that independent claims 11, 12, 14, and 18 define over *Hirabayashi* based on similar reasoning. Furthermore, claims 2-4 and 16 define over *Hirabayashi* at least based on their dependence from one of the above-mentioned independent claims, as well as on their own merits.

In view of the above, Applicant respectfully requests reconsideration and withdrawal of the Examiner's rejection under 35 U.S.C. § 102 based on the teachings of *Hirabayashi.*

Furthermore, Applicant respectfully submits that dependent claim 5 defines over the teachings of *Hirabayashi* at least in view of its dependence from claim 1, as well as on its own merits. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the Examiner's rejection under 35 U.S.C. § 103 based on the teachings of *Hirabayashi.*


2.     § 102 Rejection: *Sato*

Claim 6 stands rejected under 35 U.S.C. § 102 as allegedly being anticipated by *Sato et al.* (U.S. Patent 5,832,124). This rejection is respectfully traversed.

Independent claim 6 is directed to an image conversion method in which image data represented by a required number of pixels is obtained from original image data represented by a predetermined number of pixels by repeatedly carrying out interpolation calculation at a rate of one-half of the number of pixels. According to the image conversion method of claim 6, image data represented by the required number of pixels is obtained by carrying out interpolation calculation at a rate of x (wherein $1>x>1/2$) of a number of pixels at one of a beginning step, an intermediate step, and a final step of image conversion.

In rejecting independent claim 6, the Examiner cites col. 14, lines 1-3 of *Sato* as allegedly teaching the image conversion technique set forth in claim 6. In the cited portion

of *Sato*, however, the number of pixels in a longitudinal direction is reduced to 7/15 times, and the number of pixels in a lateral direction is reduced to 3/8 times, such that the aspect ratio becomes 4:3. Applicant fails to see how this technique relates to the image conversion method of claim 6, in which the required number of pixels is obtained by carrying out interpolation calculation at a rate of x (wherein 1>x>1/2) of a number of pixels at one of a beginning step, an intermediate step, and a final step of image conversion. Furthermore, *Sato* uses a thinning circuit for down-sampling (see col. 20, lines 12-19), instead of interpolation calculation as recited in claim 6.

In view of the above, Applicant respectfully requests reconsideration and withdrawal of the Examiner's rejection under 35 U.S.C. § 102 based on the teachings of *Sato*.


3.    § 102 Rejection: *Delean*

Claims 7-10, 13, 15, and 17 stand rejected under 35 U.S.C. § 102 as allegedly being anticipated by *Delean* (U.S. Patent 5,907,640). This rejection is respectfully traversed.

Independent claim 7 is directed to an image conversion method in which image data represented by a required number of pixels is obtained from original image data represented by a predetermined number of pixels. The image conversion method of claim 7 comprises: obtaining by interpolation calculation, from the original image data represented by the predetermined number of pixels, image data represented by a number of pixels of 1/N (wherein N is an integer of 2 or more) or greater, by using an N-size filter used to obtain an interpolated point from N pixels, thereby allowing image conversion; and obtaining image data represented by the required number of pixels by carrying out the interpolation calculation plural times.

Thus, claim 7 is specific to an arrangement in which an N-size filter is used to obtain an interpolated point so as to generate image data represented by a number of pixels of 1/N or greater. In the portion of *Delean* cited by the Examiner, i.e., col. 8, lines 45-60, a series of images is constructed by decimation by a factor of 2. Thus, the cited portion of *Delean* is specific to a technique of decimating pixels, not an interpolation calculation. Furthermore, *Delean* teaches constructing a series of images by decimating pixels, but does not disclose that the result of the series of decimation, which is the last image in a series, has a required number of pixels.

At least for these reasons, Applicant respectfully submits that the teachings of *Delean* fail to anticipate independent claim 7. Furthermore, independent claims 13 and 15 define over *Delean* based on similar reasoning. Claims 8-10 and 17 define over *Delean* at least for depending from one of the above-mentioned independent claims, as well as on their own merits.

In view of the above, Applicant respectfully requests reconsideration and withdrawal of the Examiner's rejection under 35 U.S.C. § 102 based on the teachings of *Delean*.
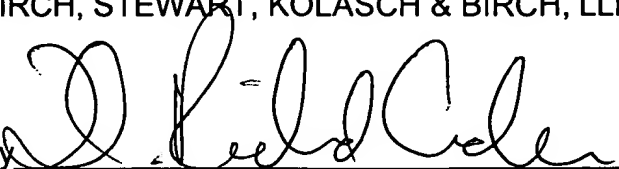
## CONCLUSION

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

Applicant respectfully petitions for a one (1) month extension of time pursuant to 37 C.F.R. §§ 1.17 and 1.136(a). A check in the amount of $110.00 in payment of the extension of time fee is attached.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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Attachment: Version With Markings to Show Changes Made

## VERSION WITH MARKINGS TO SHOW CHANGES MADE

**IN THE CLAIMS:**

New claims 19-22 have been added.